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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WILSON, YOLANDA L	

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/064,436	MOODY ET AL.	
	Examiner	Art Unit	
	Yolanda Wilson	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,14-19,22-26,29-34 and 37-39* is/are rejected.

7)☒ Claim(s) *12,13,20,21,27,28,35 and 36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

K

FINAL DETAILED ACTION

Claim Objections

1. Claims 12,13,20,21,27,28,35,36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-11,14-19,22-26,29-34,37-39 are rejected under 35 U.S.C. 102(a) as being anticipated by Bakke et al. (US Publication Number US 20020065962A1). As appears in claim 1, Bakke et al. discloses a host device having two or more ports configured to be coupled to a sequential device via corresponding links, wherein the host device is configured to associate a command identifier with a command, to transmit the command via a first one of the ports, to detect a failure associated with the transmission of the command via the first one of the ports, and to transmit the command via a second one of the ports on page 5, paragraphs 0036, 0037. The sequential device is the storage device to which the adapter is connected to.

4. As per claim 2, Bakke et al. discloses wherein the host device is configured to associate the command identifier with the command by counting commands transmitted from the host device to the sequential device and associating the count with the

corresponding command, the system further comprising a router coupled between the host device and the sequential device, wherein the router is configured to count commands transmitted from the host device to the sequential device and to associate the count with the corresponding command on page 5, paragraph 0039 and page 6, paragraph 0040. The router is the redundancy manager.

5. As per claim 3, Bakke et al. discloses wherein the host device is configured to initiate transmission of a set of commands to the sequential device by issuing a first command to establish a command stream, wherein the host device and the router are configured to begin counting commands after receiving the first command on page 5, paragraphs 0037, 0039 and on page 6, paragraph 0040.

6. As per claim 4, Bakke et al. discloses wherein the host is configured to make the command identifier explicit in the command on page 5, paragraph 0039.

7. As per claim 5, Bakke et al. discloses wherein the host device is further configured to transmit subsequent commands and corresponding command identifiers via the second one of the ports on page 5, paragraph 0039; page 7, paragraph 0054.

8. As per claim 6, Bakke et al. discloses two or more communication links corresponding to the two or more ports on page 5, paragraph 0035.

9. As per claim 7, Bakke et al. discloses wherein the communication links comprise Fibre Channel links on page 4, paragraph 0029.

10. As per claim 8, Bakke et al. discloses wherein the communication links are configured to provide Class 3 service on page 4, paragraph 0029. Class 3 service is part of Fibre Channel.

11. As per claim 9, Bakke et al. discloses a router coupled to the communication links to receive the command and command identifier from the host device, wherein the router is configured to be coupled to the sequential device on page 5, paragraph 0039.

12. As per claim 10, Bakke et al. discloses wherein the router is configured to: identify the command identifier transmitted via the second one of the ports as identical to the command identifier transmitted via the first one of the ports; and forward a portion of the command to the sequential device, wherein the forwarded portion of the command comprises a portion of the command that was not received by the sequential device via the first one of the ports on page 5, paragraph 0039 and on page 7, paragraph 0055.

13. As per claim 11, Bakke et al. discloses the host is configured to request a status of the command via the second one of the ports on page 5, paragraphs 0039,0054.

14. As per claim 14, Bakke et al. discloses wherein the host is configured to receive an indication of acceptance to beginning error recovery on page 7, paragraph 0054.

15. As per claim 15, Bakke et al. discloses a sequential device coupled to the router to receive the command on page 5, paragraph 0037.

16. As per claim 16, Bakke et al. discloses wherein the sequential device comprises a tape drive on page 4, paragraph 0029.

17. As per claim 17, Bakke et al. discloses wherein the sequential device comprises a SCSI device on page 4, paragraph 0029.

18. As per claim 18, Bakke et al. discloses a sequential device coupled to the communication links to receive the command and command identifier from the host device on page 5, paragraph 0037.

19. As per claim 19, Bakke et al. discloses wherein the host device is configured to request a status of the command via the second one of the ports on page 7, paragraph 0054.

20. As per claim 22, Bakke et al. discloses wherein the host device is configured to receive an indication of acceptance to beginning error recovery on page 7, paragraph 0054.

21. As per claims 23,31, Bakke et al. discloses associating a first command identifier with a first command; transmitting the first command via a first link; detecting a failure of the first link; and transmitting at least a portion of the first command and first command identifier via a second link on page 5, paragraphs 0036, 0037 and on page 7, paragraph 0054.

22. As per claims 24, 32 The method of claim 23, the method is implemented in a host and a router coupled between the host and a sequential device, wherein associating a first command identifier with a first command comprises the host and the router counting commands transmitted from the host device to the sequential device and associating the count with the corresponding command, and wherein transmitting the first command via a first link, detecting a failure of the first link and transmitting at least a portion of the first command and first command identifier via a second link are

performed by the host on page 5, paragraphs 0036,0037,0039 and on page 6, paragraph 0040.

23. As per claims 25,33, Bakke et al. discloses initiating transmission of a set of commands to the sequential device by issuing a first command to establish a command stream, wherein the host device and the router are configured to begin counting commands after receiving the first command on page 5, paragraphs 0037,0039.

24. As per claims 26,34, Bakke et al. discloses wherein associating the first command identifier with the first command comprises making the first command identifier explicit in the first command on page 5, paragraph 0039.

25. As per claim 29, Bakke et al. discloses receiving at the router the first command and first command identifier via the second link and executing an unexecuted portion of the first command on page 5, paragraph 0039 and page 7, paragraph 0054.

26. As per claim 30, Bakke et al. discloses identifying the first command and first command identifier received via the second link, identifying a redundant portion of the first command received via the second link and discarding the redundant portion of the first command on page 5, paragraph 0039 and page 7, paragraph 0054.

27. As per claim 37, Bakke et al. discloses wherein the software product is implemented in a device driver on page 3, paragraph 0027.

28. As per claim 38, Bakke et al. discloses wherein the software product is implemented in a shim driver between a device driver and a command driver on page 3, paragraph 0027.

29. As per claim 39, Bakke et al. discloses wherein the command driver comprises a SCSI driver on page 3, paragraph 0027.

Response to Arguments

30. Applicant's arguments filed January 24, 2005 pertaining to claims 1,2,3,10,23, 24,31,32 have been fully considered but they are not persuasive. Applicant's arguments for claims 12,13,20,21,27,28,35,36 have been found to be persuasive.

31. Concerning claim 1 discussed on pages 8-9, Applicant argues, "It is unclear where these paragraphs describe assigning an identification to a command as they simply suggest that the chip encapsulation code receives a response to the command. How a response is correlated to a command is not described (i.e., based on timing or based on some other mechanism)." Examiner notes that in paragraph 0037, on page 5, "The command issued by the host operating system and/or applications 122, 124 may be stored in the adapter's write cache 340, if available...The device then sends a response indicating if the command was successfully executed or if an error or other conditions attach to the response."; therefore, each command can be identified by a "command identifier" either in the cache or with the command itself represented by the opcode which identifies it. Either way the command is represented by an identification of some kind since a response is required for each command sent. Also, it is inherent in the operation of the system that within a specific amount of time a response is needed to be received by the host system.

32. Concerning claim 2 discussed on pages 9-10, Applicant argues "it is unclear as to where paragraph 0039 of Bakke teaches that any portion of Bakke counts commands

or that a router is configured to count commands transmitted from the host device to the sequential device." Examiner wishes to point out that it is clearly pointed out on page 6, paragraph 0040 that the redundancy manager checks to see which commands are outstanding to be executed by the sequential device; therefore, the redundancy manager does keep a record of the commands. Also Applicant argues, "Thus, the redundancy manager of Bakke is part of the host system adapter that allows a host system to connect to peripheral devices and is not a router coupled to the host device." Examiner would like to point out the host system adapter does connect the host system to the peripheral device; therefore, the redundancy manager is seen as router in this case. If Applicant wants their router to be external to the system, then Applicant needs to add this limitation to the claim. Applicant argues "Moreover, even if the redundancy manager is a router as asserter by the Examiner, paragraph 0039 discusses how the redundancy manager identifies peripheral devices connected by N paths. There is no teaching or suggestion that, even as a router, the redundancy manager should count commands." Examiner would like to point out that on page 6, paragraph 0040 does point out that the redundancy manager keeps track of the commands.

33. Concerning claim 3 discussed on page 11, Applicant argues, "Even if the redundancy manager is considered a router solely for the sake of argument, these paragraphs do not disclose counting commands at that router and counting the commands at the host device. Without a teaching of both counting commands at the host device and counting commands at the router, Bakke does not teach all the features of Claim 3." Examiner would like to point out that on page 6, paragraph 0040 does point

out that the redundancy manager keeps track of the commands. Also, the host system adapter keeps track of the commands also by way of needing a response from the commands.

34. Concerning claim 10 discussed on pages 11-12, Applicant argues that paragraph 0039 "does not appear to address assigning an identification to command. While the redundancy manager...Applicants are unable to find any teaching regarding a specific identification for a command in paragraph 0039." Examiner would like to point out on page 7, paragraph 0055, that there is an identification of some kind to know which commands have been sent to the sequential device and to know which need to be retried along another path as indicated in paragraph 0055 and in previous arguments on identification.

35. Concerning claims 23 and 31 discussed on pages 13-14, Applicant argues "Applicants are unable to find a teaching or suggestion in paragraph 0036 or 0037 that a command (or portion thereof) should be retransmitted on a second link using the same command identifier that was transmitted with the command on the first link if the first link fails" Examiner would like to point out on page 7, paragraph 0055, that there is an identification of some kind to know which commands have been sent to the sequential device and to know which need to be retried along another path as indicated in paragraph 0055 and in previous arguments on identification.

36. Concerning claims 24 and 32 discussed on page 14, Applicant argues "Applicants are unable to find any reference to a host and a router counting commands as part of associating a command with a command identifier in paragraphs 0036,0037,

or 0039 of Bakke." Examiner would like to point out that on page 6, paragraph 0040 does point out that the redundancy manager keeps track of the commands. Also, the host system adapter keeps track of the commands also by way of needing a response from the commands.

Conclusion

37. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yolanda Wilson whose telephone number is (571) 272-3653. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).